

Re Point V.

IAP20 Rec'd PCT/PTO 17 NOV 2005

- 1 In the present opinion, reference is made to the following documents:

D1: XIONG-WEI L: "Five-axis NC cylindrical milling of sculptured surfaces" COMPUTER AIDED DESIGN, ELSEVIER PUBLISHERS BV., BARKING, GB, Vol. 27, No. 12, December 1, 1995 (1995-12-01), pages 887-894, X P004022742 ISSN: 0010-4485

D2: PATENT ABSTRACTS OF JAPAN, Vol. 1999, No. 11, September 30, 1999 (1999-09-30) & JP 11 156621 A (HITACHI TOOL ENG LTD), June 15, 1999 (1999-06-15)

2 INDEPENDENT CLAIM 1

- 2.1 Document D1 is considered the most proximate related art. It discloses (cf. Abstract):

*A method for cutting freeform surfaces on workpieces, a workpiece being cut by a cutting tool and the cutting tool being moved for cutting purposes along a defined cutting path relative to the workpiece and a cutting tool being used.*

- 2.1.1 from which the subject matter of independent Claim 1 differs in that:

*the tool head of the cutting tool has a greater radius than a tool shank of the cutting tool.*

- 2.1.2 Therefore, the subject matter of Claim 1 is novel (Article 33 (2) PCT).

- 2.1.3 The feature "the tool head of the cutting tool has a greater radius than a tool shank of the cutting

tool" represents only one of several obvious possibilities from which one skilled in the art would select according to the circumstances, without an inventive step, to implement the claimed method.

- 2.1.4 The subject matter of Claim 1 lies in the selection of a cutting tool from the cutting tools described in document D2

Such a selection, however, can only be regarded as inventive if the cutting tool has unexpected effects or properties with respect to the rest of the cutting tools. Such effects or properties, however, are not indicated in the application. The subject matter of Claim 1 is therefore not based on inventive activity.

3 INDEPENDENT CLAIM 10

- 3.1 The present application does not satisfy the requirements of Article 33(1) PCT, because the subject matter of Claim 10 is not novel in the sense of Article 33(2) PCT.

- 3.1.1 Document D2 discloses (the references in parentheses relate to this document):

*A cutting tool (1) having a tool shank (7) and a tool head (2), the radius of the tool head (9) being greater than the radius of the tool shank (Figure 3).*

Therefore, the subject matter of Claim 10 is not novel (Article 33 (2) PCT).

4 INDEPENDENT CLAIM 13

4.1 The present application does not satisfy the requirements of Article 33(1) PCT, because the subject matter of Claim 13 is not based on an inventive activity in the sense of Article 33(3) PCT.

4.1.1 Document D2 is considered to be the most proximate related art with respect to the subject matter of Claim 13. It discloses (the references in parentheses relate to this document):

*A cutting tool (1) having a tool shank (7) and a tool head (2), the radius of the tool head (9) being greater than the radius of the tool shank (Figure 3).*

4.1.2 The subject matter of Claim 13 therefore differs from the subject matter known from D2 in that

*such a cutting tool is used for manufacturing rotationally symmetric, disk-shaped or ring-shaped components.*

4.1.3 The method provided in Claim 13 of the present application cannot be regarded as inventive for the following reasons (Article 33 (3) PCT):

The subject matter of Claim 13 lies in the selection of a cutting tool from the cutting tools described in document D2. Such a selection, however, can only be regarded as inventive if the cutting tool has unexpected effects or properties with respect to the rest of the cutting tools. Such effects or properties, however, are not indicated in the application. The subject matter of Claim 1 is therefore not based on inventive activity.

5 INDEPENDENT CLAIMS 2-9, 11 and 12

Claims 2-9, 11 and 12 do not contain any features that, in combination with the features of any claim to which they relate, satisfy the requirements of the PCT with regard to novelty and inventive activity.

The reasons for this are as follows:

Dependent Claims 2-9 have as their subject matter minor structural modifications of the method according to Claim 1, which lie within the framework of what one skilled in the art does habitually on the basis of familiar considerations, particularly since the advantages thereby achieved may be surveyed in advance. Consequently, the subject matter of Claims 2-9 is also not based on inventive activity.

Document D2 discloses all features of dependent Claims 11 and 12. Therefore, the subject matter of these claims is not novel.

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